

CLAIM AMENDMENTS

Please cancel claims 6-7 without prejudice or disclaimer.

Please amend claims 1-5, 8-9, 18, and 21-22 as follows.

1. (Currently Amended) A method for updating an existing portion of platform firmware data in persistent firmware memory, comprising:

writing updated firmware data to a memory location in the persistent firmware memory that is different from a memory location of the existing platform firmware data so that the persistent firmware memory comprises both the existing platform firmware data and the updated platform data that is to replace the existing portion of platform firmware data to a firmware storage device in which the existing portion of firmware data is stored; and

performing an atomic operation to modify atomically modifying firmware configuration data in the firmware storage device to indicate whether the existing platform the updated firmware data or the updated platform firmware data is valid and is to be loaded and executed, such that only used in place of the existing portion of platform firmware data will be loaded and executed before the atomic operation is performed and only the updated platform firmware data will be loaded and executed after the atomic operation is performed that is being updated such that only the existing portion of platform firmware data is valid prior to the atomic modification of the firmware configuration data and only the updated firmware data is valid after the atomic modification to the firmware configuration data.

2. (Currently Amended) The method of claim 1, further comprising performing an integrity check of the updated platform firmware data to verify that the updated platform firmware data is valid.

3. (Currently Amended) The method of claim 1, wherein the updated platform firmware data is written to the persistent firmware memory storage device in a manner in which the updated platform firmware data is invisible to a firmware management system used to access firmware data stored on the persistent firmware memory storage device until the atomic modification of the firmware configuration data has been performed [made].

4. (Currently Amended) The method of claim 1, further comprising enabling a full recovery of the existing portion of platform firmware data that is to be updated during an upgrade process in response to a system anomaly that prevents completion of the upgrade process.

5. (Currently Amended) The method of claim 1, further comprising deleting the at least a portion of existing portion of platform firmware data after it has been upgraded.

Claims 6-7. (Canceled).

8 (Currently Amended) The method of claim 1, wherein the firmware storage device memory comprises a flash memory device.

9. (Currently Amended) A method for updating a plurality of existing platform firmware files in persistent firmware memory, which at least a portion of existing platform firmware data comprises header data indicating whether or not the existing platform firmware data is valid and is to be updated, the method comprising:

modifying the header data of the existing platform firmware data to indicate that the existing platform firmware data is valid and is to be updated files are stored;

writing data corresponding to a plurality of updated platform firmware data files comprising new versions of the plurality of existing platform firmware files to a memory location that is different from the memory location of the existing plarform firmware data so tha the persistent firmware memory comprises both the existing platform firmware data and the updated platform firmware data, which update platform firmware data comprises header data indicating that the updated platform firmware data is not valid and is not to be updated the temporary file; and

performing an atomic operation to modify the header data of the modifying platform firmware file configuration information in the platform storage device to indicate that the updated platform firmware data is valid and is not to be updated, thereby indicating that files are to be used in place of the existing platform firmware files such that only the existing platform firmware files or only the updated platform firmware data is to be loaded and executed instead of the existing platform firmware data files are valid at any point in time during an update process.

10. (Original) The method of claim 9, wherein each platform firmware file comprises a file header and a data area in which platform firmware data corresponding to that file is written, and wherein each file header includes a plurality of state bits that are used to track a current state of each platform firmware file during the update process.

11. (Previously Presented) The method of claim 10, wherein the temporary file is created by creating a file header that identifies the temporary file includes a data area that is sized to hold all of the updated platform firmware files, said data area being mapped to a memory area on a firmware storage device that is used to store the existing and updated platform firmware files.

12. (Original) The method of claim 11, further comprising changing a state bit in the temporary file's file header to indicate that the temporary file is invalid after data corresponding to the updated platform firmware files are written to the data area of the temporary file.

13. (Original) The method of claim 12, wherein a file system is used to access the platform firmware files and the updated firmware files appear invisible to the file system prior to when the state bit is changed and become visible to the file system after the state bit is changed.

14. (Previously Presented) The method of claim 13, wherein each existing platform firmware file has a name that is shared by a corresponding updated platform firmware file, further comprising:

changing the state bits in each of the existing platform firmware files to indicate they are to be updated;

setting the state bits in each of the updated platform firmware files to indicate that they are valid,

wherein, upon becoming visible to the file system, the state bits in the file headers of the updated platform files in combination with the state bits in the existing platform firmware files simultaneously inform the file system that the existing platform files are invalid and the updated platform files are valid.

15. (Previously Presented) The method of claim 9, further comprising performing an integrity check of the updated platform firmware files to verify that the updated firmware files are valid prior to atomically modifying the platform firmware file configuration information to indicate that the updated platform firmware files are to be used in place of the existing platform firmware

16. (Previously Presented) The method of claim 9, further comprising enabling a full recovery of the existing platform firmware files that are to be updated during the upgrade process in response to a system anomaly that prevents completion of the upgrade process.

17. (Previously Presented) The method of claim 10, further comprising setting the state bits in each file header of the existing platform firmware files to indicate the file is deleted after the upgrade process has been complete.

18. (Currently Amended) A machine readable media on which a plurality of machine-executable instructions are stored that when executed by a machine updates an existing portion of platform firmware data partitioned into a plurality of sets of firmware code by performing the operation of:

writing updated firmware data to a memory location in the persistent firmware memory that is different from a memory location of the existing platform firmware data so that the persistent firmware memory comprises both the existing platform firmware data and the updated platform data that are to replace the existing portion of platform firmware data to a firmware storage device in which the existing portion of firmware data is stored; and

performing an atomic operation to modify atomically modifying firmware configuration data in the firmware storage device to indicate whether the existing platform the updated firmware data or the updated platform firmware data is valid and is to be loaded and executed, such that only used in place of the existing portion of platform firmware data will be loaded and executed before the atomic operation is performed and only the updated platform firmware data will be loaded and executed after the atomic operation is performed that is being updated such that only the existing portion of platform firmware data are valid prior to the atomic modification

~~of the firmware configuration data and only the updated firmware data are valid after the atomic modification to the firmware configuration data.~~

19. (Original) The machine readable medium of claim 18, wherein execution of the plurality of machine instructions further performs the operation of performing an integrity check of the updated firmware data to verify that the updated firmware data is valid.

20. (Previously Presented) The machine readable medium of claim 18, wherein execution of the plurality of machine instructions further enable the machine to perform a full recovery of the existing portion of firmware data that is to be updated during an upgrade process in response to a machine anomaly that prevents completion of the upgrade process.

21. (Currently Amended) A machine readable media on which a plurality of machine-executable instructions are stored that when executed by a machine updates a plurality of existing platform firmware files in persistent firmware memory wherein each of said plurality of existing platform firmware files comprises header data indicating whether or not the existing platform firmware file is valid and is to be updated by performing the operations of:

creating a temporary pad file in a firmware storage device at a memory location in the persistent firmware memory which is different from the memory location of the existing platform firmware files, the pad file having a data area and a header data indicating that the pad file is valid in which the existing platform firmware files are stored;

writing data corresponding to a plurality of updated platform firmware files comprising new versions of the plurality of existing platform firmware files to the data area of the temporary pad file so that the persistent firmware memory comprises both the plurality of existing platform firmware files and the plurality of updated platform firmware files, each of the plurality of update platform firmware files comprising header data indicating that the updated platform firmware file is valid and is not to be updated;

modifying the header data of each of the existing platform firmware files to indicate that the existing platform firmware file is valid and is to be updated; and

performing an atomic operation to modify the header data of the pad file to indicate that the pad file is not valid, thereby indicating atomically modifying platform firmware

~~file configuration information in the firmware storage device to indicate that the updated platform firmware files written to the data area of the pad file are to be loaded and executed instead of the existing are to be used in place of the original platform firmware files such that only the original platform firmware files or only the updated platform firmware files are valid at any point in time during an update process.~~

22. (Currently Amended) The machine readable media of claim 21, wherein each platform firmware file comprises a file header and a data area in which platform firmware data corresponding to that file is written, and wherein each file header includes a plurality of state bits that are used to track a current state of each platform firmware file during the update process.

23. (Previously Presented) The machine readable media of claim 22, wherein the temporary file is created by creating a file header that identifies the temporary file includes a data area that is sized to hold all of the updated platform firmware files, said data area being mapped to a memory area on a firmware storage device that is used to store the existing and updated platform firmware files.

24. (Original) The machine readable media of claim 23, wherein execution of the plurality of machine instructions further performs the operation of changing a state bit in the file header of the temporary file to indicate that the temporary file is invalid after data corresponding to the updated platform firmware files are written to the data area of the temporary file.

25. (Original) The machine readable media of claim 24, wherein a file system is used to access the platform firmware files and the updated firmware files appear invisible to the file system prior to when the state bit is changed and become visible to the file system after the state bit is changed.

26. (Previously Presented) The machine readable media of claim 25, wherein each existing platform firmware file has a name that is shared by a corresponding updated platform firmware file, and wherein execution of the plurality of machine instructions further performs the operations of:

changing the state bits in each of the existing platform firmware files to indicate they are to be updated; and

setting the state bits in each of the updated platform firmware files to indicate that they are valid,

wherein, upon becoming visible to the file system, the state bits in the file headers of the updated platform files in combination with the state bits in the platform firmware files simultaneously inform the file system that the existing platform files are invalid and the updated platform files are valid.

27. (Previously Presented) The machine readable media of claim 21, wherein execution of the plurality of machine instructions further performs the operation of performing an integrity check of the updated platform firmware files to verify that the updated firmware files are valid prior to atomically modifying the platform firmware file configuration information to indicate that the updated platform firmware files are to be used in place of the existing platform firmware.

28. (Previously Presented) The machine readable media of claim 21, wherein execution of the plurality of machine instructions further performs the operation of enabling a full recovery of the existing platform firmware files that are to be updated during the upgrade process in response to a system anomaly that prevents completion of the upgrade process.

29. (Previously Presented) The machine readable media of claim 22, wherein execution of the plurality of machine instructions further performs the operation of setting the state bits in each file header of the existing platform firmware files to indicate the file is deleted after the upgrade process has been complete.